

Attachment 4

America COMPETES Reauthorization Act of 2010

Only includes the relevant sections of the legislation that address the circumstances making the collection of information on the Survey of Graduate Students and Postdoctorates in Science and Engineering necessary.

America COMPETES¹ Reauthorization Act of 2010

H. R. 5116—26

SEC. 505. NATIONAL CENTER FOR SCIENCE AND ENGINEERING STATISTICS.

- (a) ESTABLISHMENT. – There is established within the Foundation a National Center for Science and Engineering Statistics that shall serve as a central Federal clearinghouse for the collection, interpretation, analysis, and dissemination of objective data on science, engineering, technology, and research and development.
- (b) DUTIES. – In carrying out subsection (a) of this section, the Director, acting through the Center shall –
- (1) collect, acquire, analyze, report, and disseminate statistical data related to the science and engineering enterprise in the United States and other nations that is relevant and useful to practitioners, researchers, policymakers, and the public, including statistical data on –
 - (A) research and development trends.
 - (B) the science and engineering workforce.
 - (C) United States competitiveness in science, engineering, technology, and research and development; and
 - (D) the condition and progress of United States STEM education.
 - (2) support research using the data it collects, and on methodologies in areas related to the work of the Center; and
 - (3) support the education and training of researchers in the use of large-scale, nationally representative data sets.
- (c) STATISTICAL REPORTS. – The Director or the National Science Board, acting through the Center, shall issue regular, and as necessary, special statistical reports on topics related to the national and international science and engineering enterprise such as the biennial report required by section 4(j)(1) of the National Science Foundation Act of 1950 (42 U.S.C. 1863(j)(1)) on indicators of the state of science and engineering in the United States.

¹ Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science.

FY 2020 HERD Survey Population Screening Methodology

For the FY 2020 cycle of the Higher Education Research and Development (HERD) Survey, the National Science Foundation will again field two versions of the survey: a version for institutions expending \$1 million or more for research and development (R&D) and a shorter version for institutions spending between \$150,000 and \$999,999 for R&D. This document outlines the specifics for how each population will be defined and identified.

Defining the Populations

For both the FY 2020 HERD and the HERD Short Form surveys, the population is made up of public and private nonprofit academic institutions in the United States that offer an accredited bachelor's degree or higher and are headed by a president, chancellor or equivalent. The population for the HERD survey includes those institutions that expended \$1 million or more for R&D in FY 2019. The population for the HERD Short Form is institutions that spent at least \$150,000 but less than \$1 million for R&D in FY 2019.

Frame Construction

We will compile a list of institutions that includes all institutions in the FY 2019 HERD Survey population or population review, all public or private nonprofit institutions in the Integrated Postsecondary Education Data System (IPEDS) that grant bachelor or higher degrees, and all institutions included in the Higher Education Publication (HEP) *Higher Education Directory* that are public or private nonprofit and grant bachelor's degrees or higher. Specific guidelines for downloading IPEDS data from the Department of Education website will be followed. A list of all accredited, degree-granting institutions in the United States will be purchased from HEP. Included in the data obtained from IPEDS and HEP will be research expenditures, information about highest degree offered, type of control (e.g., public, private), title of the senior administrator, whether the institution is part of a system, and institution's city and state. Data files from all stages of frame construction will be stored for quality control reviews. The majority of the frame will be a subset of institutions included in the list. The frame will include:

- 1) All institutions with \$1 million or more in total R&D on the FY 2019 HERD Survey. These institutions will be included in the population for the FY 2020 HERD survey without additional review.
- 2) All institutions with \$150,000 or more but less than \$1 million in total R&D on the FY 2019 HERD Survey. These institutions will be included in the population for the FY 2020 HERD Short Form Survey without additional review.
- 3) Institutions reporting greater than \$0 for research on the 2018 IPEDS finance survey¹.

¹ The IPEDS Survey collects expenses by function and by accounting standards (Financial Accounting Standards Board (FASB) and Governmental Accounting Standards Board (GASB)). Current-year total expenses for research from the FASB and GASB versions of the survey will be used. Data from the 2018 IPEDS Finance survey is the most recent data available.

- 4) Institutions that did not report expenditures to IPEDS but, based on their name, location, administration, and system membership, appear to be a branch of an institution already included in the frame.
- 5) U.S. Service institutions

Institutions reporting less than \$150,000 in R&D expenditures on the FY 2019 HERD Survey will be excluded from the frame. These institutions have already indicated that they do not meet the population criteria. In addition, institutions that estimated during last year's population review that they would have less than \$150,000 in R&D expenditures for FY 2019 will also be excluded from the frame. If an institution is part of a multicampus university, we will review the administrative structure to determine which campuses should be considered individual reporting units. The system and administration information available in HEP, IPEDS and the HERD Survey will inform much of this decision making, but we will also review institution websites and contact institutions as needed. We will also exclude those that are surveyed but inactive.

Research Institutions

Within the frame we want to capture two types of research institutions that may be missed under other frame criteria – 1) research institutions that are not typically considered universities or colleges but do house a program for granting advanced degrees and 2) research institutions that are part of a university system, are not degree-granting institutions, and do not fall under the financial management of one of the degree-granting campuses. Our approach to these types of research institutions is described below:

- Research institutions that house a graduate degree program will be identified by reviewing the list of accredited doctoral degree-granting institutions that are included in the list described above but did not report research expenditures to IPEDS and are not already included in the frame based on other criteria. We will review the websites of these institutions for indications that they are performing research.
- Identifying research institutions within a university system that are not already included in the survey data of a current HERD Survey institution is a little more difficult. These institutions are not separately accredited and do not appear in HEP files or IPEDS. ICF data collection staff will review the websites of all state-level university systems and attempt to identify research centers that are managed separately from an academic campus.

Population Review Screener

All institutions that are included in the frame and are not already considered part of the survey population (see items 1 and 2 in the Frame Construction section) will be screened for inclusion in survey population. A draft of the FY 2020 population review screener is included in Appendix A. Inclusion in the FY 2020 survey population will be based upon responses to questions about FY 2019 and FY 2020 expenditures, unless those values are unavailable, in which case, FY 2019 expenditures will be used.

Population Review Procedures

We propose two types of procedures for the population review. For typical, stand-alone degree-granting institutions, we propose to follow a standard set of procedures with form e-mail and letters, which is described below. For institutions where we need to determine whether the institution meets our criteria for inclusion in the population as a unit separate from a parent institution, the population review will be conducted through individualized e-mails and phone calls completed by experienced HERD Survey data collection staff and directed by the project director.

Appendix B includes a proposed schedule and contacts for the standard FY 2020 population review. If an institution responded to the screener last year and the respondent was not the president, chancellor or equivalent, we will go directly to that respondent again this year to request information. These contacts are labeled as version 1 in latter sections. If the institution is new to the frame this year, was a nonrespondent to the population review last year, or the president was the respondent, then we will contact the senior administrator's office. These contacts are labeled as version 2 in latter sections. Version 1 and version 2 are identical except for the recipient. A third set of contacts (version 3) will be sent to institutions where an e-mail for the president, chancellor or equivalent cannot be found. Again, this version is very similar to others except it is formatted as a letter with a hard copy version of the survey enclosed and the time between contacts is longer to allow extra time for mail delivery. We expect the group of institutions without identifiable e-mail addresses to be very small. During the FY 2019 only 1 institution- needed to be contacted by mail due to missing e-mail addresses.

After two e-mails, we will contact institutions during two rounds of phone calls. After two rounds of calls, we will send a reminder via 2-day priority mail to all institutions that have not completed the screener. The package will include a letter, a hard copy version of the screener, and a postage-paid return envelope.

After a response to the population review screener is received and processed, an automated thank-you e-mail will be sent to the school president or chancellor. The e-mail will indicate whether the institution will be included in the FY 2020 survey population and will be copied to the point of contact included in the screener response. Additionally, within 2 weeks of receipt of the completed screener, a welcome letter will be sent to institutions new to the survey. The letter will be sent by 2-day priority mail to the office of the president, chancellor, or equivalent, with a copy sent to the designated respondent. The goal of the letter is to obtain support from the senior administrator. (If the senior administrator is also the designated contact, he or she will not receive this letter.) Any institution added to the population after survey launch but before January 2021 will receive the letter.

Once ICF believes that no additional institutions will be responding to the population review, we will send NCSSES a list of institutions that refused to participate in the population review or did

not respond. NCSES can then decide which institutions should be included in the FY 2020 population.